DOCUMENT RESUME

ED 429 729 PS 027 572

AUTHOR Molina, Marie-Helene Gavinski; Coplan, Robert; Wichmann, Cherami

TITLE Nonsocial Play in the Kindergarten Classroom: Gender Differences in Relations with Adjustment.

PUB DATE 1999-04-00

NOTE 10p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Albuquerque, NM, April 15-18, 1999).

PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Child Behavior; Kindergarten; *Kindergarten Children; *Play; Primary Education; *Sex Differences; Social Adjustment

ABSTRACT

This study examined gender differences in the correlates of different types of nonsocial play behaviors. Seventy-seven kindergarten children (38 males, 39 females) were observed during free play. Behaviors were categorized according to three subtypes of nonsocial play: reticent, solitary-passive, and solitary-active. Additional measures included an interview, assessment of academic achievement, parental ratings of child temperament, teachers' ratings of children's behavior problems, social competence, and academic skills. Findings from regression analyses indicated that a lack of social play for males, but not for females, was associated with indices of maladjustment. In particular, solitary-passive play was associated with positive outcomes for females, but not for males. In contrast, reticent play was a predictor of maladjustment for both genders. Findings indicate potentially different meanings in the various forms of nonsocial play behaviors for young boys and girls. Contains 17 references. (Author/HTH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 429 729

Nonsocial Play in the Kindergarten Classroom: Gender Differences in Relations With Adjustment

Marie-Hélène Gavinski Molina, Dr. Robert Coplan, and Cherami Wichmann
Carleton University
Ottawa, Ontario, Canada

Abstract

The goal of this study was to examine gender differences in the correlates of different types of nonsocial play behaviors. Seventy-seven Kindergarten children (38 males, 39 females) were observed during free play. Additional measures included an interview, assessment of academic achievement, parental ratings of child temperament, teachers ratings of children's behavior problems, social competence, and academic skills. Results from regression analyses indicated that a lack of **social play** for males, but not for females, was associated with indices of maladjustment. In particular, **solitary-passive play** was associated with positive outcomes for females, but not for males. In contrast, **reticent play** was a predictor of maladjustment for both genders. These results indicate potentially different meanings in the various forms of nonsocial play behaviors for young boys and girls.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Marie-Hélène Gavinski Molina

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Poster presented at the biennial meeting of the Society for Research in Child Development, Albuquerque, New Mexico, April 1999.

PS 027572

BEST COPY AVAILABLE

Nonsocial play in childhood is a complex, heterogeneous construct. To begin with, children may play alone for many different reasons (Rubin, 1982). Moreover, not all forms of nonsocial play appear to be risk factors for adjustment problems.

Subtypes of Nonsocial Play

Three subtypes of nonsocial play behaviors have been identified, each with their own "underlining psychological mechanisms" (Coplan & Rubin, 1998).

Reticent behavior consists of onlooking and unoccupied behavior (Coplan, Rubin, Fox, Calkins, & Stewart, 1994). This type of behavior appears to be reflective of anxiety, fear and internalizing problems both in a familiar environment (e.g., Coplan & Rubin, 1998) and in a novel setting (Coplan et al., 1994).

Solitary-passive behavior consists of quiet, exploratory and constructive behavior while playing alone (Rubin, 1982). Children who frequently display solitary-passive behavior seem to prefer solitude to socializing with their peers (Rubin & Asendorpf, 1993), perhaps being more object-oriented rather than people-oriented (Jennings, 1975). However, these children may not have a problem when they want to interact with others (Asendorpf, 1993). Solitary-passive play in early childhood has not been associated with concurrent indices of maladaptation. Moreover, this behavior tends to be positively reinforced by peers, parents and teachers, as well as being associated with peer acceptance.

Solitary-active behavior involves solitary-dramatic play and solitary-functional play. This behavioral type has been associated with more aggressive and immature forms of behavior as well as peer rejection (Rubin & Mills, 1988). While this behavior is highly salient to the peer group, it occurs rather infrequently during free play (approximately 3% of the time), making it rather difficult to study (Coplan et al., 1994). Thus, solitary-active play was not the main focus of this study.

Gender Differences

There has been little research exploring gender differences in the frequency of nonsocial play. Overall, researchers have not reported any significant gender differences in the frequency of occurrence of these types of play behaviors (e.g., Rubin, 1982; Coplan et al., 1994; Coplan & Rubin, 1998).

There is some evidence to suggest that shyness, inhibition and social withdrawal may have different "implications" for boys and girls. It has been argued that shyness in girls is more likely to be rewarded and accepted by parents, whereas shyness in boys is more likely to be discouraged (Engfer, 1993). As well, there is some evidence to suggest that as compared to withdrawn girls, withdrawn boys seem to have more difficulties (Rubin, Chen, & Hymel, 1993).

Present Study

To date, there has been no research with respect to gender differences in the adjustment outcomes of nonsocial play in early childhood. Thus, the primary goal of the current study was

to examine gender differences in the relation between nonsocial play forms and indices of adjustment (both social and academic) in the familiar setting of the Kindergarten classroom.

Method

Subjects

The participants in this study were 77 Kindergarten children (38 males, 39 females, M_{age} = 66.16 months, SD = 4.11 months) attending public Kindergarten classes in 7 schools in a mid-sized city in Ontario, Canada. The sample was ethnically and socioeconomically diverse.

Procedure/Measures

Parental ratings. Four months into the school year, parents completed the Colorado Child Temperament Inventory (CCTI, Buss & Plomin, 1984; Rowe & Plomin, 1977). For the purposes of this study, we were particularly interested in parental ratings of shyness (e.g., "child takes a long time to warm up to strangers", "child tends to be shy").

Observations of children's free-play behaviors. Six months into the school year, children's behaviors during periods of free play were observed. Behaviors were coded over a three- to four-week period using an adapted version of the Play Observation Scale (POS, Rubin, 1989). Each child was observed for 10-second intervals for up to 4-5 minutes per day, on at least three separate occasions. In total, each child was observed for 12 minutes, thus receiving 72 codes of data.

For each 10-second interval, the child's predominate free-play behavior was recorded. Some of the possible time-sampled codes were: reticent play (e.g., unoccupied, onlooker), solitary-passive play (e.g., construction and exploratory play) and social play (e.g., group play/peer conversation).

Academic achievement. Children's academic achievement was assessed individually with a series of questions designed to examine early academic skill (e.g., basic concepts, literacy and numeracy skills). The protocol included 28 items (correct/incorrect) derived from the primary battery of the Metropolitan Readiness Test (MRT, Nurss & McGauvran, 1988). Academic achievement was only available for 67 children. Cronbach's alpha for this scale was .88. A single aggregate score representing academic achievement was created.

Teacher ratings. Near the end of the school year, teachers rated children's behavior problems and social competence using the Preschool Behavior Questionnaire (PBQ, Behar & Stringfield, 1974). The two-factor solution was employed (internalizing problems and externalizing problems) (e.g., Hoge, Meginbir, Khan, & Weatherall, 1985; Moller & Rubin, 1988). Also, items pertaining to social competence were added (Tremblay, Vitaro, Gagnon, Piché, & Royer, 1992).

Teachers provided a measure of children's performance and skill improvements over the school year (academic skills). The teachers rated the children on their improvements on academic skills (e.g., understanding language, reading, and math) on a 5-point likert scale. The child's scores for each of these items were aggregated. Cronbach's alpha for this scale was .94.

Results and Discussion

Preliminary Analyses

Preliminary analyses concerned gender differences in the frequency of nonsocial and social play forms. Supporting past research (e.g., Coplan & Rubin, 1998), results from t-tests indicated no significant differences (see Table 1).

Table 1

Mean Frequency Ratings (and Standard Deviations) of Nonsocial and Social Play Forms for Males and Females

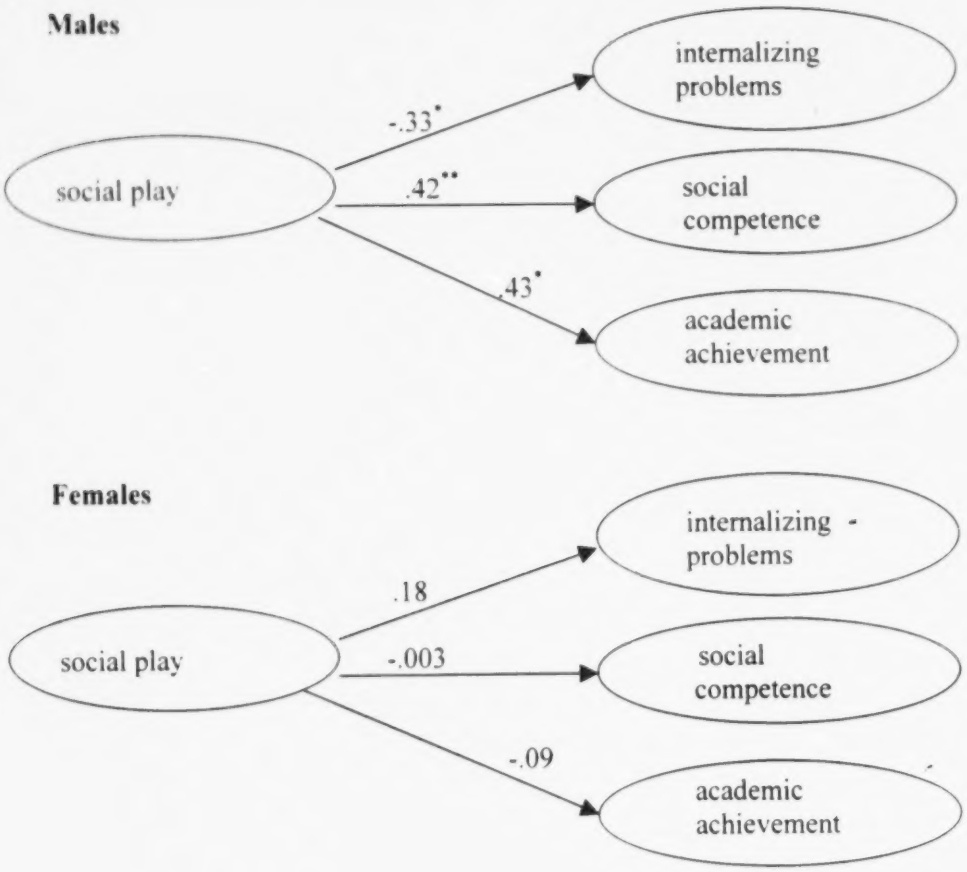
	Play Forms		
Gender	Reticent	Solitary-Passive	Social
Males	.08(.08)	.28(.18)	.47(.25)
Females	.09(.09)	.34(.17)	.41(.19)

Results also indicated no significant correlations between nonsocial or social play forms, and both parental education and child age. As such, these variables were not controlled for statistically in later analyses.

Social Play

Regression analyses were conducted to assess the main effects and interactions between gender and social play in the prediction of social (internalizing behavior, social competence) and academic adjustment (academic skills, academic achievement). Results revealed a similar pattern of results for 3 measures of adjustment. No significant main effects were found; however, significant gender by social play interactions were revealed for internalizing problems ($R^2_{change} = .06$, $F(1, 73) = 4.79$, $p < .05$), and a trend for social competence ($R^2_{change} = .04$, $F(1, 73) = 2.95$, $p < .09$) and academic achievement ($R^2_{change} = .05$, $F(1, 63) = 3.39$, $p < .07$). The interactions were explored by re-computing the regression analyses separately for males and females. Results are summarized in Figure 1.

Figure 1. Summary of Interactions for Social Play.



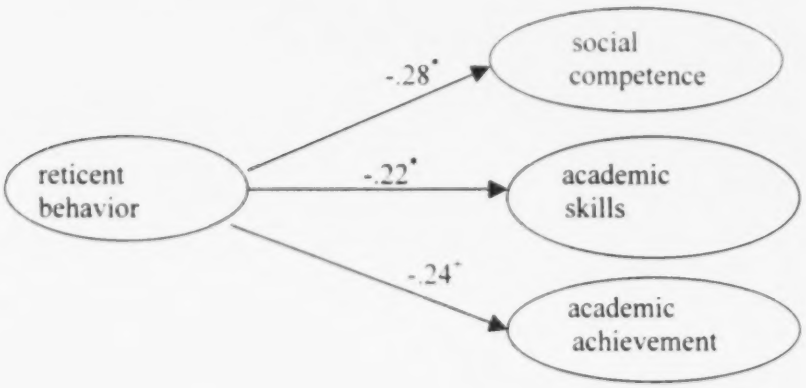
Note: Numbers represent standardized Beta's
* = p < .05
** = p < .01

Thus, it seems that a lack of social play was a predictor of maladjustment for males only. Boys who engage in less social play had more internalizing problems, as well as lower social competence and academic achievement. For girls, no associations were found. The next set of analyses examined whether certain nonsocial play forms (reticent and solitary-passive play) might differentially be associated with maladjustment for males or females.

Reticent Behavior

Regression analyses revealed that significant main effects were found for social competence(β = -.28; t = -2.55, p < .05), academic skills (β = -.22; t = -1.95, p < .05) and a trend for academic achievement (β = -.24; t = -1.75, p < .09). Results are summarized in Figure 2.

Figure 2. Summary of Main Effects for Reticent Behavior.



Note: Numbers represent standardized Beta's
* = $p < .05$
+ = $p < .10$

Thus, reticent behavior was associated with maladjustment in Kindergarten for both boys and girls. Children who displayed reticent behavior were less socially competent and had lower academic skills and academic achievement. These results are not surprising, given the fact that children who display reticent behavior tend to demonstrate anxiety and fear even when they are in a familiar context. This may impact upon their ability to acquire (and demonstrate) academic skills.

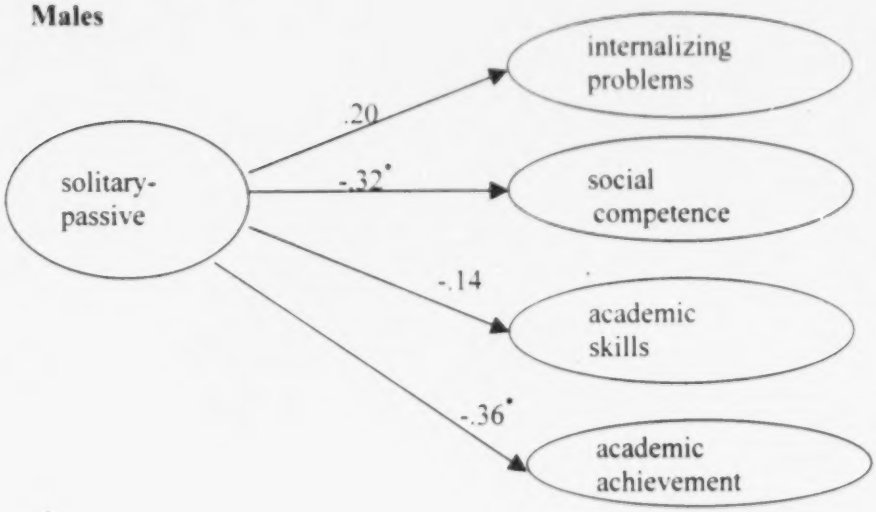
Solitary-Passive Behavior

Results from regression analyses revealed no significant main effects of gender or solitary-passive behavior in the prediction of Kindergarten adjustment. However, significant gender by solitary-passive play interactions were revealed for internalizing problems ($R^2_{change} = .05$, $F(1, 73) = 3.84$, $p < .05$), academic achievement ($R^2_{change} = .08$, $F(1, 63) = 5.64$, $p < .05$), and a trend for social competence ($R^2_{change} = .04$, $F(1, 73) = 3.45$, $p < .06$) and academic skills ($R^2_{change} = .04$, $F(1, 73) = 3.37$, $p < .07$). The interactions were explored by re-computing the regression analyses separately for males and females. Results are summarized in Figure 3.

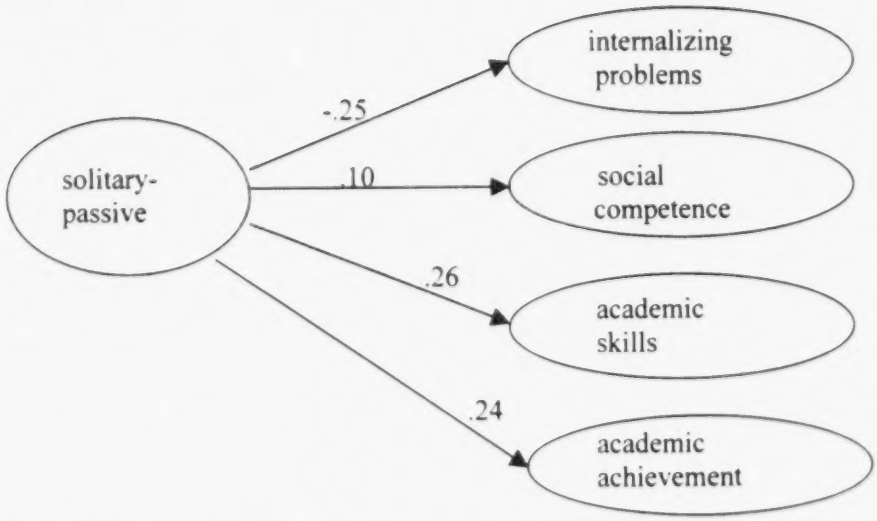
These results suggest that solitary-passive play is associated with positive outcomes for females and negative outcomes for males. That is, for females, solitary-passive play is associated with a lack of internalizing problems, greater social competence, academic skills, and academic achievement. This is consistent with the position that solitary-passive play in young children is not associated with maladaptive outcomes (e.g., Coplan et al., 1994; Rubin, 1982). However, for males, solitary-passive play was associated with lower social competence and academic achievement.

Figure 3. Summary of Interactions for Solitary-Passive Behavior.

Males



Females



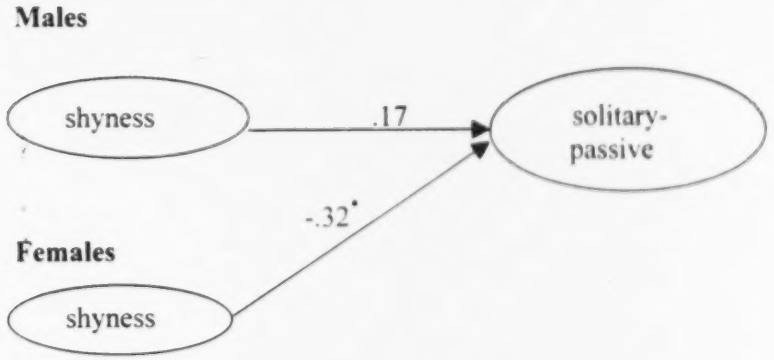
Note: Numbers represent standardized Beta's
* = $p < .05$

Shyness and Nonsocial Play

The final set of analyses concerned the temperamental correlates of reticent and solitary-passive play for males and females. In predicting shyness, a significant main effect of reticent behavior ($\beta = .23$; $t = 2.04$, $p < .05$) was found. Thus, shyness was associated with reticent behavior for both males and females.

However, for solitary-passive behavior, there were no significant main effects, but a significant gender by solitary-passive play interaction was found ($R^2_{change} = .06$; $F(1, 73) = 5.05$, $p < .05$). Exploring the interaction, it was found that for males, solitary-passive play was positively associated with temperamental shyness while for females, solitary-passive play was negatively associated with temperamental shyness. Results are summarized in Figure 4.

Figure 4. Summary of Interaction for Shyness and Solitary-Passive Behavior.



Note: Numbers represent standardized Beta's
* = $p < .05$

Implications

Results from the present study demonstrate that there are gender differences in the correlates of different types of play behaviors (social, reticent and solitary-passive play) in young children. In general, our results indicate that a lack of social play may be more detrimental to boys than girls in terms of adjustment to Kindergarten.

Moreover, certain kinds of nonsocial play forms may have different meanings for young boys than for young girls. Whereas reticent behavior was found to be associated with negative outcomes regardless of gender, solitary-passive play was associated with positive outcomes for females and negative outcomes for males. Thus, gender appears to be an important variable to consider when examining the relation between nonsocial play forms and adjustment outcomes. Future research is required to further elucidate these findings and their implications for intervention programs.

References

Asendorpf, J. B. (1993). Abnormal shyness in children. Journal of Child Psychology and Psychiatry, 34, 1069-1081.

Behar, L., & Stringfield, S. (1974). A behavior rating scale for the preschool child. Developmental Psychology, 10, 601-610.

Buss, A. H., & Plomin, R. (1984). Temperament: Early developing personality traits. Hillsdale, NJ: Erlbaum.

Coplan, R. J., & Rubin, K. H. (1998). Exploring and assessing nonsocial play in the preschool: The development and validation of the preschool play behavior scale. Social Development, 7, 71-91.

Coplan, R. J., Rubin, K. H., Fox, N. A., Calkins, S. D., & Stewart, S. L. (1994). Being alone, playing alone, and acting alone: Distinguishing among reticence and passive and active solitude in young children. Child Development, 65, 129-137.

Engfer, A. (1993). Antecedents and consequences of shyness in boys and girls: A 6-year longitudinal study. In K. H. Rubin & J. B. Asendorpf (Eds.), Social withdrawal, inhibition, and shyness in childhood (pp. 49-79). Hillsdale, NJ: Erlbaum.

Hoge, R. D., Meginbir, L., Khan, Y., & Weatherall, D. (1985). A multitrait-multimethod analysis of the Preschool Behavior Questionnaire. Journal of Abnormal Child Psychology, 13, 119-127.

Jennings, K. D. (1975). People versus object orientation, social behavior, and intellectual abilities in preschool children. Developmental Psychology, 11, 511-519.

Moller, L. C., & Rubin, K. H. (1988). A psychometric assessment of a two-factor solution for the Preschool Behavior Questionnaire in mid-childhood. Journal of Applied Developmental Psychology, 9, 167-180.

Nurss, J. R., & McGauvran, M. E. (1986). Metropolitan Readiness Test. New York: Harcourt Brace Jovanovich.

Rowe, D. C., & Plomin, R. (1977). Temperament in early childhood. Journal of Personality Assessment, 41, 150-156.

Rubin, K. H. (1982). Nonsocial play in preschoolers: Necessarily evil? Child Development, 53, 651-657.

Rubin, K. H. (1989). The Play Observation Scale (POS). University of Waterloo, Waterloo, Ontario, Canada.

Rubin, K. H., & Asendorpf, J. B. (1993). Social withdrawal, inhibition, and shyness in childhood: Conceptual and definitional issues. In K. H. Rubin & J. B. Asendorpf (Eds.), Social withdrawal, inhibition, and shyness in childhood (pp. 3-17). Hillsdale, NJ: Erlbaum.

Rubin, K. H., Chen, X., & Hymel, S. (1993). Socioemotional characteristics of withdrawn and aggressive children. Merrill-Palmer Quarterly, 39, 518-534.

Rubin, K. H., & Mills, R. S. L. (1988). The many faces of social isolation in childhood. Journal of Consulting and Clinical Psychology, 56, 916-924.

Tremblay, R. E., Vitaro, F., Gagnon, C., Piché, C., & Royer, N. (1992). A prosocial scale for the Preschool Behavior Questionnaire: Concurrent and predictive correlates. International Journal of Behavioral Development, 15, 227-245.